SDD 15D12-a Traffic Control, Lane Closure

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

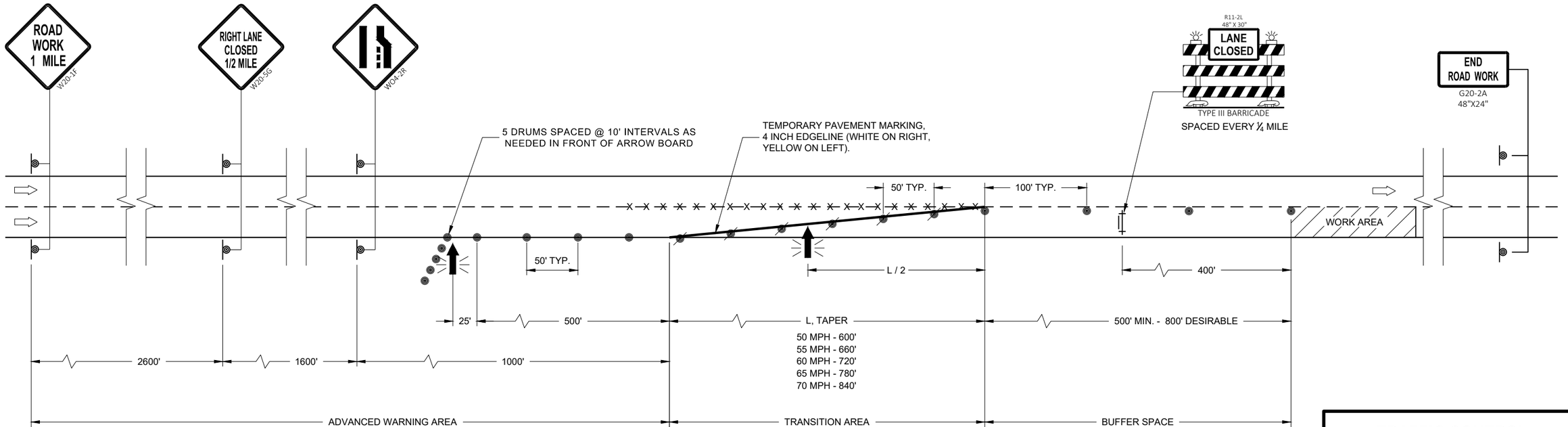
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD



TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D12 - 09a

6

SDD 15D12 - 09a

Traffic Control, Lane Closure

Reference:

Part VI from the Wisconsin Manual on Uniform Traffic Control Devices
FDM 11-50-20

Bid items associated with this drawing:

ITEM NUMBER	DESCRIPTION	UNIT
643.0300	Traffic Control Drums	DAY
643.0420	Traffic Control Barricades Type III	DAY
643.0715	Traffic Control Warning Lights Type C	DAY
643.0800	Traffic Control Arrow Boards	DAY
643.0900	Traffic Control Signs	DAY
643.1050	Traffic Control Signs PCMS	DAY
646.9000	Marking Removal Line 4-Inch	LF
649.0150	Temporary Marking Line Removable Tape 4-Inch	LF
649.0155	Temporary Marking Line Removable Contrast Tape 4-Inch	LF
649.0760	Temporary Marking Raised Pavement Marker Type I	EACH

Standard Special Provisions associated with this drawing:

STSP NUMBER	TITLE
NONE	

Other SDDs associated with this drawing:

SDD 15C2	Traffic Control, Advanced Width Restriction Signing
SDD 15C11	Traffic Control, Channelizing Devices – Drums, Cones, Barricades and Vertical Panels
SDD 15D5	Traffic Control, Single Lane Crossover Entrance with Barrier
SDD 15D11	Traffic Control, Single Lane Crossover
SDD 15D21	Traffic Control, Intersection within Single Lane Closure

Design Notes:

POSSIBLE TRANSITION AREA MODIFICATIONS:

Temporary Marking, Raised Pavement Markers can be used along with any temporary marking to aid in delineation. Raised markers shall be used when the geometry is such that it is impossible to locate the lane closure with a minimum clear view of 1500 feet in front of lane closure drums. Raised markers should not be used if the lane closure is in place for less than seven (7) continuous days and nights. Consideration should also be given to the speed of the roadway and the traffic volumes. Raised markers shall be placed at 25 foot spacing when they are used as a solid lane line and at 50 foot spacing when they are used as a broken lane line.

Cover existing and permanent signs to prevent conflicts with detours or other traffic operations.

In lieu of covering signs, the contractor may choose to remove and reinstall them.

An overview detail specific to the project should be used in conjunction with this detail. Additional advance warning signs (beyond 1 mile in advance) should be shown on the overview sheet, if necessary.

Contact Person:

Andrew Heidtke (414) 220-6802

SDD 15D12-b Traffic Control, Lane Closure, Speed Reduction

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

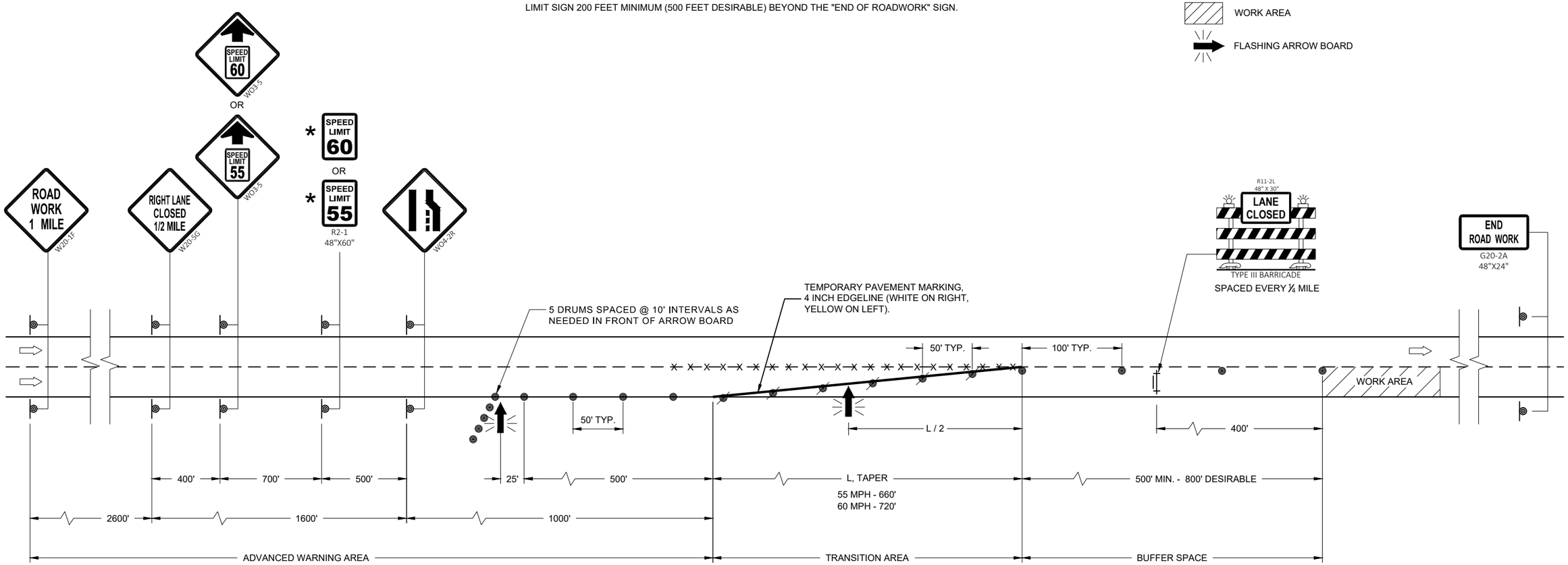
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END OF ROADWORK" SIGN.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D12 - 09b

6

SDD 15D12 - 09b

Reference:

Part VI from the Wisconsin Manual on Uniform Traffic Control Devices
FDM 11-50-20
TeOps 13-5-6

Bid items associated with this drawing:

ITEM NUMBER	DESCRIPTION	UNIT

Bid items associated with this drawing in addition to those shown on sheet a:
NONE (see sheet a)

Standard Special Provisions associated with this drawing:

STSP NUMBER	TITLE

NONE

Other SDDs associated with this drawing:

SDD 15C2	Traffic Control, Advanced Width Restriction Signing
SDD 15C11	Traffic Control, Channelizing Devices – Drums, Cones, Barricades and Vertical Panels
SDD 15D5	Traffic Control, Single Lane Crossover Entrance with Barrier
SDD 15D11	Traffic Control, Single Lane Crossover
SDD 15D21	Traffic Control, Intersection within Single Lane Closure

Design Notes:

POSSIBLE ADVANCE WARNING AREA MODIFICATIONS:

Refer to the Traffic Engineering, Operations and Safety Manual TeOps 13-5-6 for additional speed reduction guidance.

POSSIBLE TRANSITION AREA MODIFICATIONS:

Temporary Marking, Raised Pavement Markers can be used along with any temporary marking to aid in delineation. Raised markers shall be used when the geometry is such that it is impossible to locate the lane closure with a minimum clear view of 1500 feet in front of lane closure drums. Raised markers should not be used if the lane closure is in place for less than seven (7) continuous days and nights. Consideration should also be given to the speed of the roadway and the traffic volumes. Raised markers shall be placed at 25 foot spacing when they are used as a solid lane line and at 50 foot spacing when they are used as a broken lane line.

Cover existing and permanent signs to prevent conflicts with detours or other traffic operations.

In lieu of covering signs, the contractor may choose to remove and reinstall them.

An overview detail specific to the project should be used in conjunction with this detail. Additional advance warning signs (beyond 1 mile in advance) should be shown on the overview sheet, if necessary.

Include Temporary Regulatory Speed Limit Reduction Standardized Special Provision (STSP). Miscellaneous quantities should include items and quantities for the additional signing for temporary regulatory speed zone modification as needed. Double mark signs to enhance visibility, i.e. inside and outside shoulder. Indicate location of temporary regulatory speed limit; beyond entrance ramp acceleration lanes, and other locations within the project limits where traffic is allowed to enter .

Contact Person:

Andrew Heidtke (414) 220-6802

SDD 15D12-c Traffic Control, Dynamic Late Merge System

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- (S) — PORTABLE TRAFFIC SENSOR (PTS)
- FBS — FLASHING BEACON SIGNS

STOPPED OR SLOW TRAFFIC WHEN FLASHING
WO8-76
60x36

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

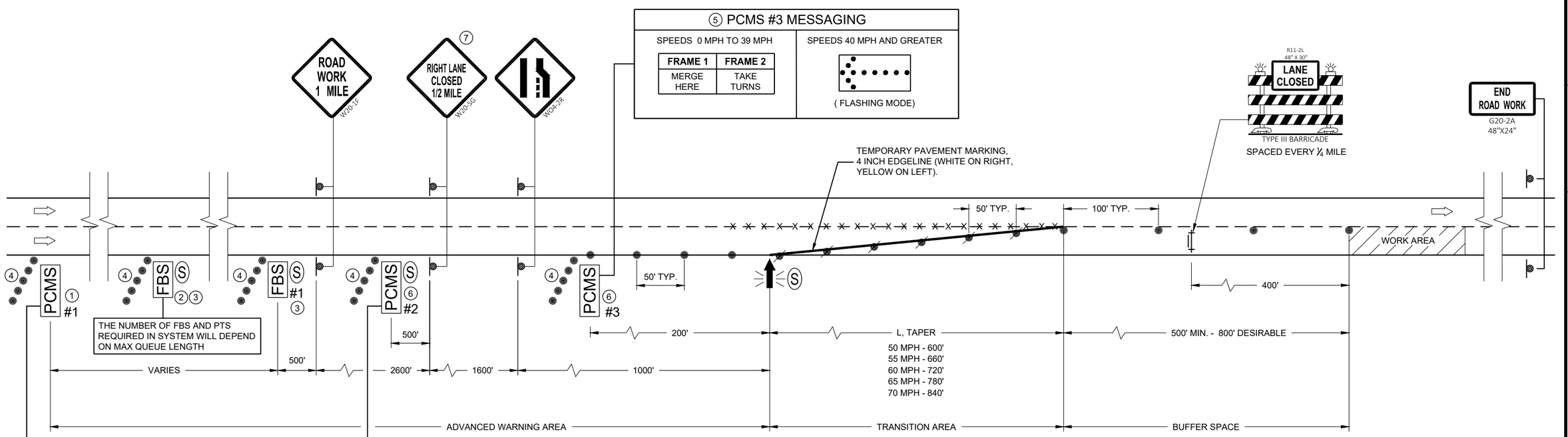
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION. ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A cROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

PORTABLE TRAFFIC SENSOR (PTS) MAY BE MOUNTED ON PCMS, FBS, ARROW BOARD OR OTHER TRAILER DEVICES.

1. PLACE PCMS #1 ONE MILE BEYOND ESTIMATED MAXIMUM QUEUE LENGTH. PLACE FLASHING BEACON SIGNS EVERY ONE MILE BETWEEN THE W20 - 1F AND PCMS #1 BEYOND ESTIMATED QUEUE.
2. PLACE FLASHING BEACON SIGNS EVERY ONE MILE BETWEEN PCMS #1 AND FBS #1. THE NUMBER OF FBS MAY BE MORE THAN SHOWN ON THIS DETAIL.
3. FOR THREE LANE CONFIGURATION, PLACE FBS ON BOTH SIDES OF ROADWAY. CHANGE PCMS #1 FRAME 2 MESSAGE TO "USE ALL LANES".
4. 5 DRUMS SPACED @ 10' INTERVALS AS NEEDED.
5. PCMS SHALL FOLLOW ARROW BOARD STANDARDS WHEN DISPLAYING FLASHING FOUR CORNER CAUTION MODE OR FLASHING ARROW MERGE MODE.
6. TO MINIMIZE OBSTRUCTION OF THE ARROW BOARD BY THE PCMS, OFFSET THE PCMS AS NEEDED FROM THE EDGE LINE
7. IF THERE IS AN APPROVED TEMPORARY SPEED DECLARATION, ADD WO-3-5 SIGNS 400 FEET AFTER THE W20-5G SIGNS AND ADD R2-1 SIGNS (48"x60") 700 FEET AFTER THE WO3-5 SIGNS. A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A "RESUME SPEED LIMIT" SIGN 200 FEET MINIMUM (800 FEET DESIRABLE) BEYOND THE G30-3A "END ROAD WORK" SIGN.



TRAFFIC CONTROL, DYNAMIC LATE MERGE SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

SDD 15D12 - 09c

SDD 15D12 - 09c

Traffic Control, Lane Closure, Dynamic Late Merge System 2 Lane

Reference:

Part VI from the Wisconsin Manual on Uniform Traffic Control Devices
FDM 11-50-20
TeOps 13-5-6

Bid items associated with this drawing:

ITEM NUMBER	DESCRIPTION	UNIT

Bid items associated with this drawing in addition to those shown on sheet a:
NONE (see sheet a)

Standard Special Provisions associated with this drawing:

STSP NUMBER	TITLE	
643.1100.S	Dynamic Late Merge System	DAY

Other SDDs associated with this drawing:

SDD 15C2	Traffic Control, Advanced Width Restriction Signing
SDD 15C11	Traffic Control, Channelizing Devices – Drums, Cones, Barricades and Vertical Panels
SDD 15D5	Traffic Control, Single Lane Crossover Entrance with Barrier
SDD 15D11	Traffic Control, Single Lane Crossover
SDD 15D21	Traffic Control, Intersection within Single Lane Closure
SDD 15D40	Traffic Control, Lane Shift, Multi-Lane Divided or One-Way Road
SDD 15D41	Traffic Control, Lane Shift, Multi-Lane Divided

Design Notes:

LEFT LANE WORK:

For work requiring a left lane closure, use the Dynamic Late Merge System detail to close the right lane of traffic, followed by the Traffic Control Lane Shift detail to shift traffic to the right lane, allowing the left lane to be closed. Do not reverse the traffic control on the Dynamic Late Merge System detail for use on a left lane closure.

POSSIBLE ADVANCE WARNING AREA MODIFICATIONS:

Refer to the Traffic Engineering, Operations and Safety Manual TeOps 13-5-6 for additional speed reduction guidance.

POSSIBLE TRANSITION AREA MODIFICATIONS:

Temporary Marking, Raised Pavement Markers can be used along with any temporary marking to aid in delineation. Raised markers shall be used when the geometry is such that it is impossible to locate the lane closure with a minimum clear view 1500 feet in front of lane closure drums. Raised markers should not be used if the lane closure is in place for less than seven (7) continuous days and nights. Consideration should also be given to the speed of the roadway and the traffic volumes. Raised markers shall be placed at 25 foot spacing when they are used as a solid lane line and at 50 foot spacing when they are used as a broken lane line.

Cover existing and permanent signs to prevent conflicts with detours or other traffic operations.

In lieu of covering signs, the contractor may choose to remove and reinstall them.

An overview detail specific to the project should be used in conjunction with this detail.

Miscellaneous quantities should include items and quantities for the additional signing for temporary regulatory speed zone modification as needed. Double mark signs to enhance visibility, i.e. inside and outside shoulder. Indicate location of temporary regulatory speed limit; beyond entrance ramp acceleration lanes, and other locations within the project limits where traffic is allowed to enter .

Contact Person:

Andrew Heidtke (414) 220-6802

SDD 15D12-d Traffic Control, Lane Closure, Basic Traffic Queue Warning System

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD
- (S) PORTABLE TRAFFIC SENSOR (PTS)
- FBS FLASHING BEACON SIGN

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS, INCLUDING FBS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED SIGNS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

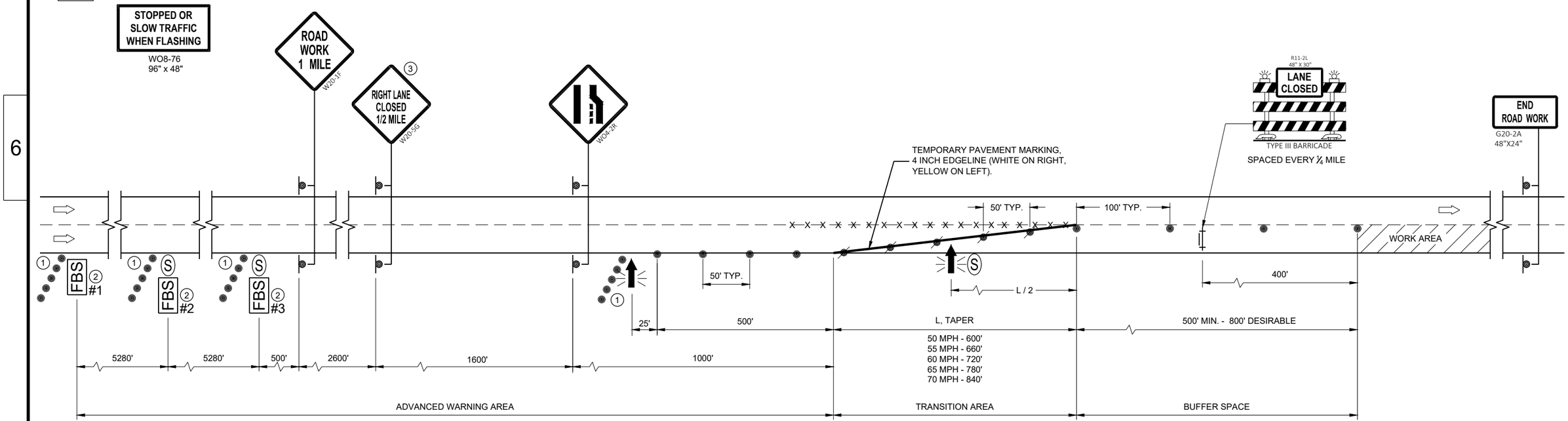
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

PORTABLE TRAFFIC SENSOR (PTS) MAY BE MOUNTED ON THE FBS, ARROW BOARD OR OTHER TRAILER DEVICES.

1. 5 DRUMS SPACED AT 10 FOOT INTERVALS AS NEEDED.
2. IF THERE ARE MORE THAN TWO LANES OR IF SPECIFIED IN THE PLANS, PLACE FBS ON BOTH SIDES OF THE ROADWAY.
3. IF THERE IS AN APPROVED TEMPORARY SPEED DECLARATION, ADD WO-3-5 SIGNS 400 FEET AFTER THE W20-5G SIGNS AND ADD R2-1 SIGNS (48"x60") 700 FEET AFTER THE WO3-5 SIGNS. A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A "RESUME SPEED LIMIT" SIGN 200 FEET MINIMUM (800 FEET DESIRABLE) BEYOND THE G30-3A "END ROAD WORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

Reference:

Part VI from the Wisconsin Manual on Uniform Traffic Control Devices
FDM 11-50-20
TeOps 13-5-6

Bid items associated with this drawing:

ITEM NUMBER	DESCRIPTION	UNIT

Bid items associated with this drawing in addition to those shown on sheet a:
NONE (see sheet a)

Standard Special Provisions associated with this drawing:

STSP NUMBER	TITLE	
643.1205.S	Basic Traffic Queue Warning System	DAY

Other SDDs associated with this drawing:

SDD 15C2	Traffic Control, Advanced Width Restriction Signing
SDD 15C11	Traffic Control, Channelizing Devices – Drums, Cones, Barricades and Vertical Panels
SDD 15D5	Traffic Control, Single Lane Crossover Entrance with Barrier
SDD 15D11	Traffic Control, Single Lane Crossover
SDD 15D21	Traffic Control, Intersection within Single Lane Closure

Design Notes:

If truck percentages are greater than 20%, consider placing FBS on both sides of the roadway.

POSSIBLE ADVANCE WARNING AREA MODIFICATIONS:

Refer to the Traffic Engineering, Operations and Safety Manual TeOps 13-5-6 for additional speed reduction guidance.

POSSIBLE TRANSITION AREA MODIFICATIONS:

Temporary Marking, Raised Pavement Markers can be used along with any temporary marking to aid in delineation. Raised markers shall be used when the geometry is such that it is impossible to locate the lane closure with a minimum clear view 1500 feet in front of lane closure drums. Raised markers should not be used if the lane closure is in place for less than seven (7) continuous days and nights. Consideration should also be given to the speed of the roadway and the traffic volumes. Raised markers shall be placed at 25 foot spacing when they are used as a solid lane line and at 50 foot spacing when they are used as a broken lane line.

Cover existing and permanent signs to prevent conflicts with detours or other traffic operations.

In lieu of covering signs, the contractor may choose to remove and reinstall them.

An overview detail specific to the project should be used in conjunction with this detail.

Miscellaneous quantities should include items and quantities for the additional signing for temporary regulatory speed zone modification as needed. Double mark signs to enhance visibility, i.e. inside and outside shoulder. Indicate location of temporary regulatory speed limit; beyond entrance ramp acceleration lanes, and other locations within the project limits where traffic is allowed to enter .

Contact Person:

Andrew Heidtke (414) 220-6802

SDD 15D12-e Traffic Control, Lane Closure, Traffic Queue Warning System

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- (S) PORTABLE TRAFFIC SENSOR (PTS)

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS, INCLUDING FBS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED SIGNS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

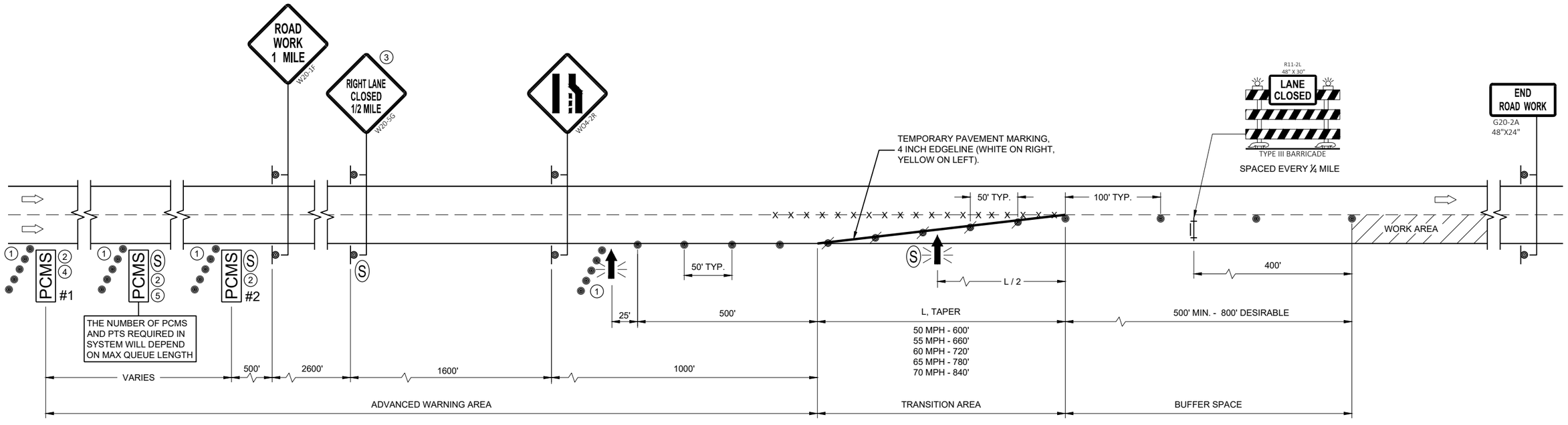
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

PORTABLE TRAFFIC SENSOR (PTS) MAY BE MOUNTED ON PCMS, ARROW BOARD OR OTHER TRAILER DEVICES.

1. 5 DRUMS SPACED AT 10 FOOT INTERVALS AS NEEDED.
2. IF THERE ARE MORE THAN TWO LANES OR IF SPECIFIED IN THE PLANS, PLACE PCMS ON BOTH SIDES OF THE ROADWAY.
3. IF THERE IS AN APPROVED TEMPORARY SPEED DECLARATION, ADD WO-3-5 SIGNS 400 FEET AFTER THE W20-5G SIGNS AND ADD R2-1 SIGNS (48"x60") 700 FEET AFTER THE WO3-5 SIGNS. A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A "RESUME SPEED LIMIT" SIGN 200 FEET MINIMUM (800 FEET DESIRABLE) BEYOND THE G30-3A "END ROAD WORK" SIGN.
4. PLACE PCMS #1 ONE MILE BEYOND ESTIMATED MAXIMUM QUEUE LENGTH, OR AS THE ENGINEER DIRECTS.
5. PLACE PCMS EVERY ONE MILE BETWEEN PCMS #1 AND PCMS #2, OR AS THE ENGINEER DIRECTS. THE NUMBER OF PCMS MAY BE MORE THAN SHOWN ON THIS DETAIL.
6. PCMS SHALL FOLLOW ARROW BOARD STANDARDS WHEN DISPLAYING FLASHING FOUR CORNER CAUTION MODE OR FLASHING ARROW MERGE MODE.



6 PCMS MESSAGING

SPEEDS 0 MPH TO 19 MPH		SPEEDS 20 MPH TO 39 MPH		SPEEDS 40 MPH AND GREATER
FRAME 1	FRAME 2	FRAME 1	FRAME 2	(FLASHING CAUTION MODE)
STOPPED TRAFFIC AHEAD	EXPECT DELAYS	SLOW TRAFFIC AHEAD	PREPARE TO STOP	

TRAFFIC CONTROL, LANE CLOSURE, TRAFFIC QUEUE WARNING SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6
SDD15D12 - 09e

Traffic Control, Lane Closure, Traffic Queue Warning System

Reference:

Part VI from the Wisconsin Manual on Uniform Traffic Control Devices
FDM 11-50-20
TeOps 13-5-6

Bid items associated with this drawing:

ITEM NUMBER	DESCRIPTION	UNIT

Bid items associated with this drawing in addition to those shown on sheet a:
NONE (see sheet a)

Standard Special Provisions associated with this drawing:

STSP NUMBER	TITLE
643.1200.S	Portable Automated Real-Time Traffic Queue Warning System .....DAY

Other SDDs associated with this drawing:

SDD 15C2	Traffic Control, Advanced Width Restriction Signing
SDD 15C11	Traffic Control, Channelizing Devices – Drums, Cones, Barricades and Vertical Panels
SDD 15D5	Traffic Control, Single Lane Crossover Entrance with Barrier
SDD 15D11	Traffic Control, Single Lane Crossover
SDD 15D21	Traffic Control, Intersection within Single Lane Closure

Design Notes:

POSSIBLE ADVANCE WARNING AREA MODIFICATIONS:

Refer to the Traffic Engineering, Operations and Safety Manual TeOps 13-5-6 for additional speed reduction guidance.

POSSIBLE TRANSITION AREA MODIFICATIONS:

Temporary Marking, Raised Pavement Markers can be used along with any temporary marking to aid in delineation. Raised markers shall be used when the geometry is such that it is impossible to locate the lane closure with a minimum clear view 1500 feet in front of lane closure drums. Raised markers should not be used if the lane closure is in place for less than seven (7) continuous days and nights. Consideration should also be given to the speed of the roadway and the traffic volumes. Raised markers shall be placed at 25 foot spacing when they are used as a solid lane line and at 50 foot spacing when they are used as a broken lane line.

Cover existing and permanent signs to prevent conflicts with detours or other traffic operations.

In lieu of covering signs, the contractor may choose to remove and reinstall them.

An overview detail specific to the project should be used in conjunction with this detail.

Miscellaneous quantities should include items and quantities for the additional signing for temporary regulatory speed zone modification as needed. Double mark signs to enhance visibility, i.e. inside and outside shoulder. Indicate location of temporary regulatory speed limit; beyond entrance ramp acceleration lanes, and other locations within the project limits where traffic is allowed to enter

Contact Person:

Andrew Heidtke (414) 220-6802